

REMARKS

Claims 1, 3-5 and 7-10 have been finally rejected under 35 USC 103 as being unpatentable over Chen in view of Braida; and, Claims 2 and 6 have been finally rejected under 35 USC 103 as unpatentable over Chen in view of Braida and further in view of Basu. For the reasons set forth below, Applicants believe that the claims as amended are allowable over the cited art.

The present invention is directed to a method and a system for performing a method for providing synchronization of audio to video comprising processing a video signal, comprising original video content, to generate a video output comprising at least one time stamped acoustic identification of the content of the audio associated with the video signal with the original video content **without altering the original video content**; processing an audio signal to generate an audio output comprising at least one time stamped acoustic identification of the content of the audio signal; and synchronizing the video signal to the audio signal by adjusting at least one of the signals to align at least one acoustic identification from the video signal with a corresponding acoustic identification from the audio signal. The invention includes, among other features, the generating of a video output with unaltered original video content and at least

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one time stamped acoustic identification. The invention further includes the steps of generating an audio output with at least one time stamped acoustic identification, and synchronizing the signals by adjusting at least one of the signals in order to align the time stamped acoustic identifications.

The Chen patent is directed to a system and method for improving the appearance of a videophone display by fetching stored visemes which correspond to phonemes in the audio signal and overlaying the fetched visemes over the streamed videophone display in order to make the display appear synchronous with the audio (see: Col. 2, lines 31-34, Col. 3, lines 7-9). The fetched visemes are speaker-independent, meaning that the stored and overlain visemes are not visemes of the displayed speaker who is speaking on the videophone call (see: Col. 4, lines 6-10). After a period of time during which a call is ongoing, the Chen system can store visemes of the actual speaker and then overlay visemes of that speaker over a subsequently-received "live" display to obtain a display with a more consistent appearance (Col. 4, lines 42-44). The Chen system is not synchronizing the streamed video signal to the live audio signal, but is replacing or overlaying the live video signal with stored visemes to match the audio. As such, Chen alters the original video content, unlike the present invention which presents the original video content synchronously with the audio.

The Chen patent does not teach or suggest the claimed feature of processing a video signal to generate a video output comprising original video content and at least one time stamped acoustic identification of the content of the video signal. Furthermore, the Chen patent does not teach or suggest that the original video content of the video signal be synchronized to the audio signal by adjusting at least one of the signals to align the time stamped acoustic identification from the video signal with a corresponding acoustic identification from the audio signal. Rather, Chen superimposes a different video signal over the live video signal, the different video signal comprising visemes which have been fetched from storage. Applicants respectfully assert that the Chen patent does not teach or suggest the invention as claimed, and in fact teaches away from the claimed invention since Chen expressly teaches that the non-synchronous live video signal be covered up in order to appear synchronous, rather than aligned with the audio signal to actually be synchronous.

Applicants note that, in the Response to Arguments section of the Final Office Action, the Examiner acknowledged that the Chen patent teaches modification of the video signal. The Examiner also stated that "[n]either the claimed invention or Chen says anything about the video signal being 'live'." Applicants respectfully assert that, since the Chen patent is directed to a videophone system, the Chen patent does process

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"live" received video signals. More significant, however, is the fact that Chen does not display unaltered original video signals, whether live, delayed, or prerecorded. Rather, Chen alters the video signal for synchronous display with the audio.

In contrast, the present invention synchronously displays the original video signal with the audio signal without altering the video content of the video signal. The present invention can perform synchronization on original video signals whether the signals comprise a live video stream, a motion picture stream, or a video, as explicitly stated in the Specification on page 8, lines 8-12. The original Specification further enumerates eight representative applications of the present invention, from page 13, line 3 through page 14, line 3, wherein audio can be synchronized to original video content. Applicants have amended the language of the independent claims to highlight the distinction over the Chen approach. Applicants respectfully assert that the Chen patent does not teach or suggest the invention as is now claimed.

Applicants have again reviewed the additionally cited Braida and Basu patents and respectfully assert that neither patent provides the teachings which are missing from the Chen patent. Neither Braida nor Basu teaches or suggests processing a video signal to create a video output comprising the original video content along with time stamp acoustic identification of the content, processing an audio signal to create an audio output of

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time stamped acoustic identification, and synchronizing the video to the audio signals by adjusting at least one to align the acoustic identifications in the signals.

The Braida patent has been cited for time stamping. Applicants respectfully assert that, even if one were to modify the Chen patent teachings with the Braida time stamping, the combination would not obviate the present invention. Since Chen superimposes visemes over the video signal based on the audio content, Applicants contend that even if Chen time stamped the original video signal, it would still not provide an original, unaltered video signal for synchronous display with the audio signal. Rather, Chen would have a time stamped and overlaid video display. Accordingly, the combination would not obviate the invention as claimed in Claims 1, 3-5, and 7-10.

With regard to the rejections of Claims 2 and 6, the Applicants rely on the above arguments with regard to the combined teachings of Chen and Braida. Moreover, the addition of the Basu patent teachings regarding the use of a Viterbi algorithm for synchronization, would not render the claim language obvious. Applicants contend that even if Chen was modified to include the Basu use of a Viterbi algorithm, it would still not arrive at a system and method to provide an original, unaltered video signal for synchronous display with an audio signal. Rather, Chen would have Viterbi-synchronized audio with superimposed, altered video display. Accordingly, the

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combination would not obviate the invention as claimed in Claims 2 and 6.

Based on the foregoing amendments and arguments, Applicants respectfully request entry of the amendments, withdrawal of the obviousness rejections, and issuance of the claims.

Respectfully submitted,

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